

REMARKS/ARGUMENTS

Claims 33 through 46 are pending in this application. Applicant proposes adding claims 47 through 52. The Examiner has indicated claims 33 through 39 are allowed. Claims 40 through 46 stand rejected as allegedly being anticipated by U.S. Patent 6,042,389 (Lemke et al.).

Applicant's undersigned representative respectfully requests reconsideration of the present application in light of the above-recited amendments and following remarks.

The Prior Art Rejection

Claim 40 is directed to an electrical connector assembly adapted for forming a mechanical and electrical connection between a substrate and a component having an array of fusible elements thereon. The assembly comprises:

a first connector half, said first connector half having first and second surfaces, said first surface having an array of reflowable elements thereon for electrical and mechanical connection to corresponding mating elements already on the substrate, said second surface having a first array of connecting elements, said reflowable elements electrically connected to said first array of connecting elements; and

a second connector half, said second connector half having first and second surfaces, said first surface having an array of mounting tail contacts thereon for electrical and mechanical connection to the array of fusible elements on the component, said second surface having a second array of connecting elements adapted to intermate with said first array of connecting elements, said mounting tail contacts electrically connected to said second array of connecting elements, **wherein each of said mounting tail contacts extends into and terminates in an opening formed in said first surface of said second connector half, and is spaced apart from said second connector half.**

In order for a reference to anticipate claim 40 and the claims depending therefrom, the reference must teach all of the claim limitations, including those emphasized. Applicant's undersigned representative respectfully submits that Lemke et al. do not teach or even suggest the emphasized claim limitations, and therefore cannot possibly teach the claimed combination.

Claim 47 is similarly directed to an electrical connector assembly adapted for forming a mechanical and electrical connection between a substrate and a component having an array of fusible elements thereon. The assembly comprises:

a first connector half, said first connector half having first and second surfaces, said first surface having an array of reflowable elements thereon for electrical and mechanical connection to corresponding mating elements already on the substrate, said second surface having a first array of connecting elements, said reflowable elements electrically connected to said first array of connecting elements; and

a second connector half, said second connector half having first and second surfaces, said first surface having an array of mounting tail contacts thereon for electrical and mechanical connection to the array of fusible elements on the component, said second surface having a second array of connecting elements adapted to intermate with said first array of connecting elements, said mounting tail contacts electrically connected to said second array of connecting elements,

wherein each of said mounting tail contacts extends into and terminates in an opening formed in said first surface of said second connector half, and remains separated from the second connector half by an air gap until reflow with the array of fusible elements on the component.

In order for a reference to anticipate claim 47 and the claims depending therefrom, the reference must teach all of the claim limitations, including those emphasized. Applicant's undersigned representative respectfully submits that Lemke et al. do not teach or even

suggest the emphasized claim limitations, and therefore cannot possibly teach the claimed combination.

Lemke et al. disclose a “low profile board to board connector system.” (Abstract). The connector system comprises a plug connector 20 and a receptacle 52. (See Fig. 4). Plug connector 20 has solder balls 35 along its external side for connection to a circuit board. (See Figs. 4 and 5). Similarly, receptacle 52 has solder balls 74 along its external side for connection to a circuit board. (See Figs. 4 and 5). Thus, Lemke et al. teach a connector system wherein both connector halves have solder balls 35 and 74, i.e. reflowable mating elements, for mating with external components. As shown in Figure 4, each solder ball 35, 74 forms a “mass that **fills and conforms to the shape of the well**” 50 and **extends beyond the well 50** and the surfaces of connector halves 20, 52. Col. 5, ll. 7-8. In contradistinction, claim 40 specifies that “each of said mounting tail contacts extends into and **terminates in an opening** formed in said first surface of said second connector half, **and is spaced apart from said second connector half.**” Similarly, claim 47 specifies that “each of said mounting tail contacts extends into and **terminates in an opening** formed in said first surface of said second connector half, **and remains separated from the second connector half by an air gap until reflow with the array of fusible elements on the component.**” Lemke et al. simply do not teach or suggest these claim limitations. Indeed, by teaching solder balls 35 and 74 that extend *beyond the well 50 and connector halves 20 and 52* and which *fill and conform to the shape of the wells*, Lemke et al. actually teach away from the claimed limitations.

Therefore, because they neither teach nor suggest mounting tail contacts terminating in an opening and either spaced apart from the second connector half or separated from the

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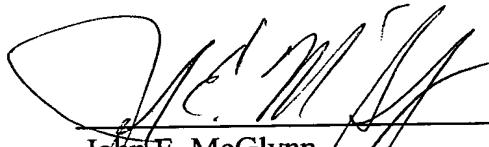
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second connector half by an air gap, Lemke et al. do not anticipate or render obvious claims 40 and 47. Dependent claims 41 through 52 similarly are not anticipated. Withdrawal of the rejections under 35 U.S.C. § 102(b) is respectfully requested.

CONCLUSION

Applicant's undersigned representative respectfully submits that claims 33 through 52 patentably define over the prior art of record. Reconsideration of the Office Action issued on July 15, 2003 and a Notice of Allowance are respectfully requested.

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